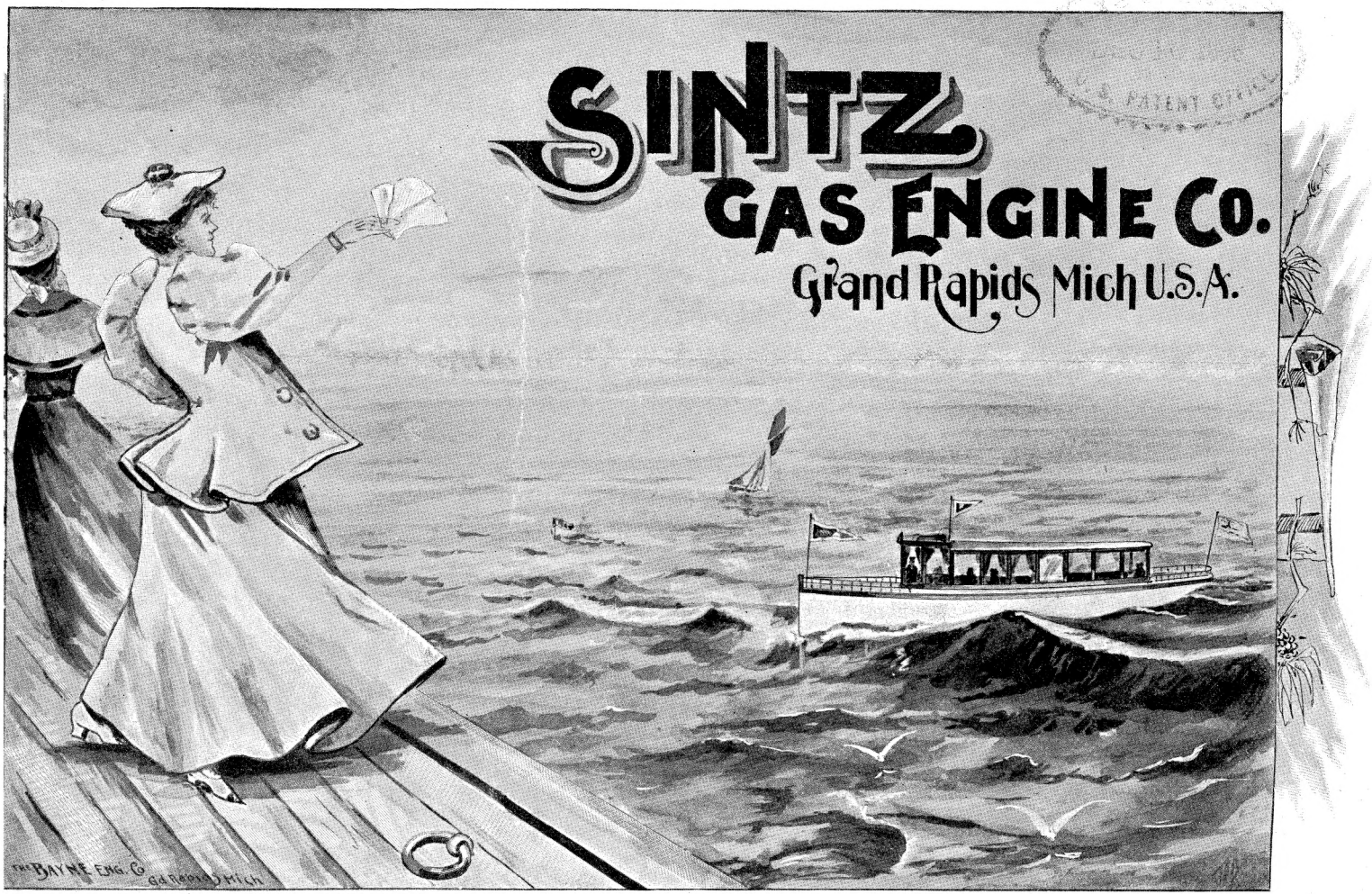

SINTZ
GAS ENGINE CO.
Grand Rapids Mich U.S.A.
THE BAYNE ENG. CO. GD RAPIDS MICH

Sintz Gas Engine Co.,

A. A. BARBER, President.
FRED D. HILLS, Vice-Pres't.
F. C. MILLER, Secretary.
H. A. WINTER, Treas. & Mgr.

Builders and Manufacturers of

LAUNCHES,

Marine and Stationary.....
Gas and Gasoline Engines.

GRAND RAPIDS, MICH., U. S. A.

The James Bayne Co.,
Engravers and Printers,
Grand Rapids, Mich.

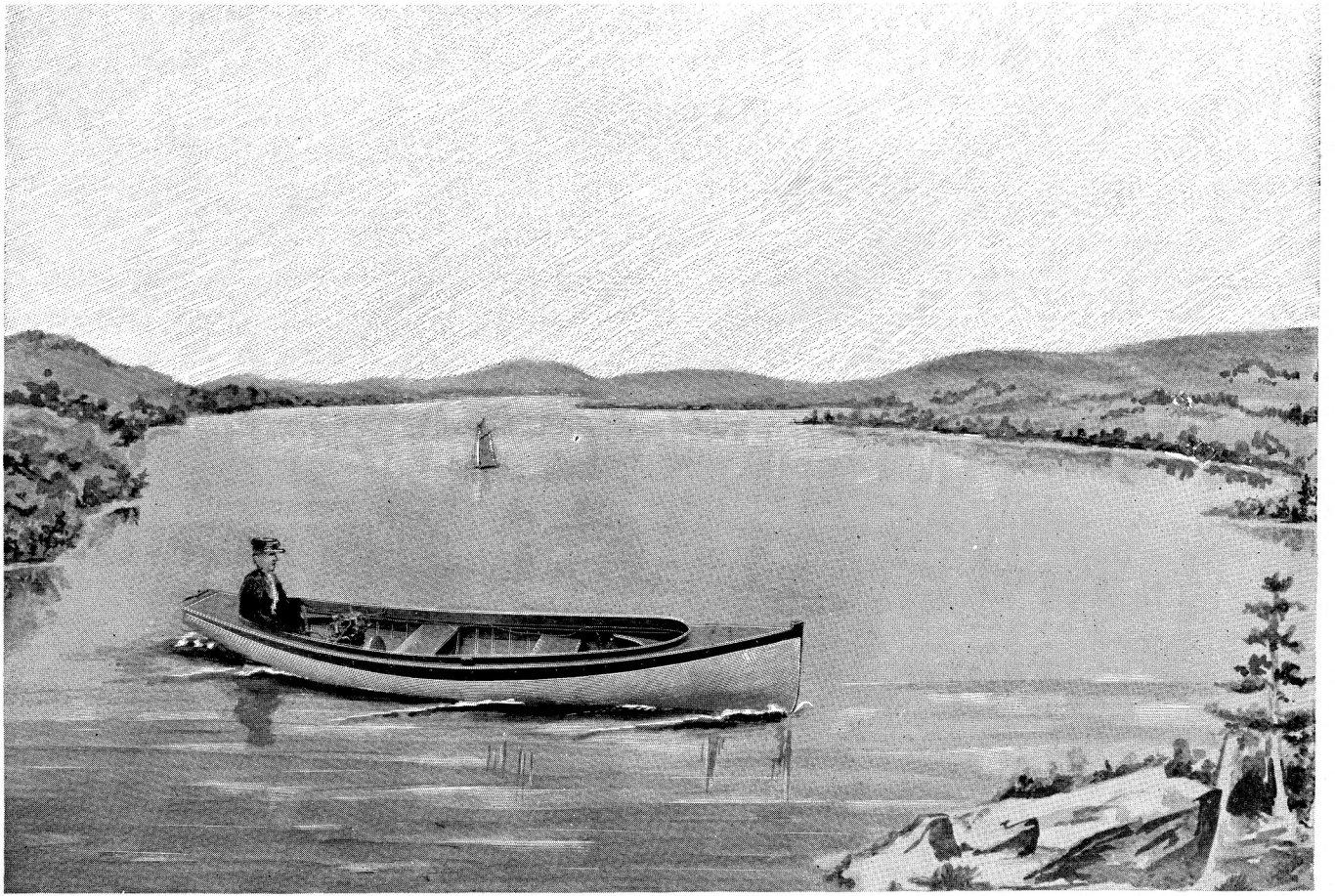

PART OF THE
T.P.Y.C. FLEET

To the Public.

THERE is undoubtedly no country on the face of the earth which even distantly approaches our own in respect to the number and beauty of its inland water ways. Lakes and rivers in every section of the country conspire to make boating one of the favorite and most popular pastimes of the American people. Of late years in particular a new impetus has been given to this form of outing or recreation by the great improvements made in pleasure crafts adapted to cruising inland waters. The sail and oar are no longer the reliance of lovers of boating, for the compact, easily managed marine engine, using gasoline for fuel, is now the popular propelling power and can always be relied upon.

In buying a marine engine, always buy the best. The best is none too good. There are many engines being offered for sale which are only experiments, consisting of numberless springs, cams and hot valves, which should be avoided. Select the one with the least moving parts. Ascertain which engine the public recommends by writing for testimonials.

Any one who can pay the price can advertise a cheap and inferior experiment with all the gusto a good article merits.



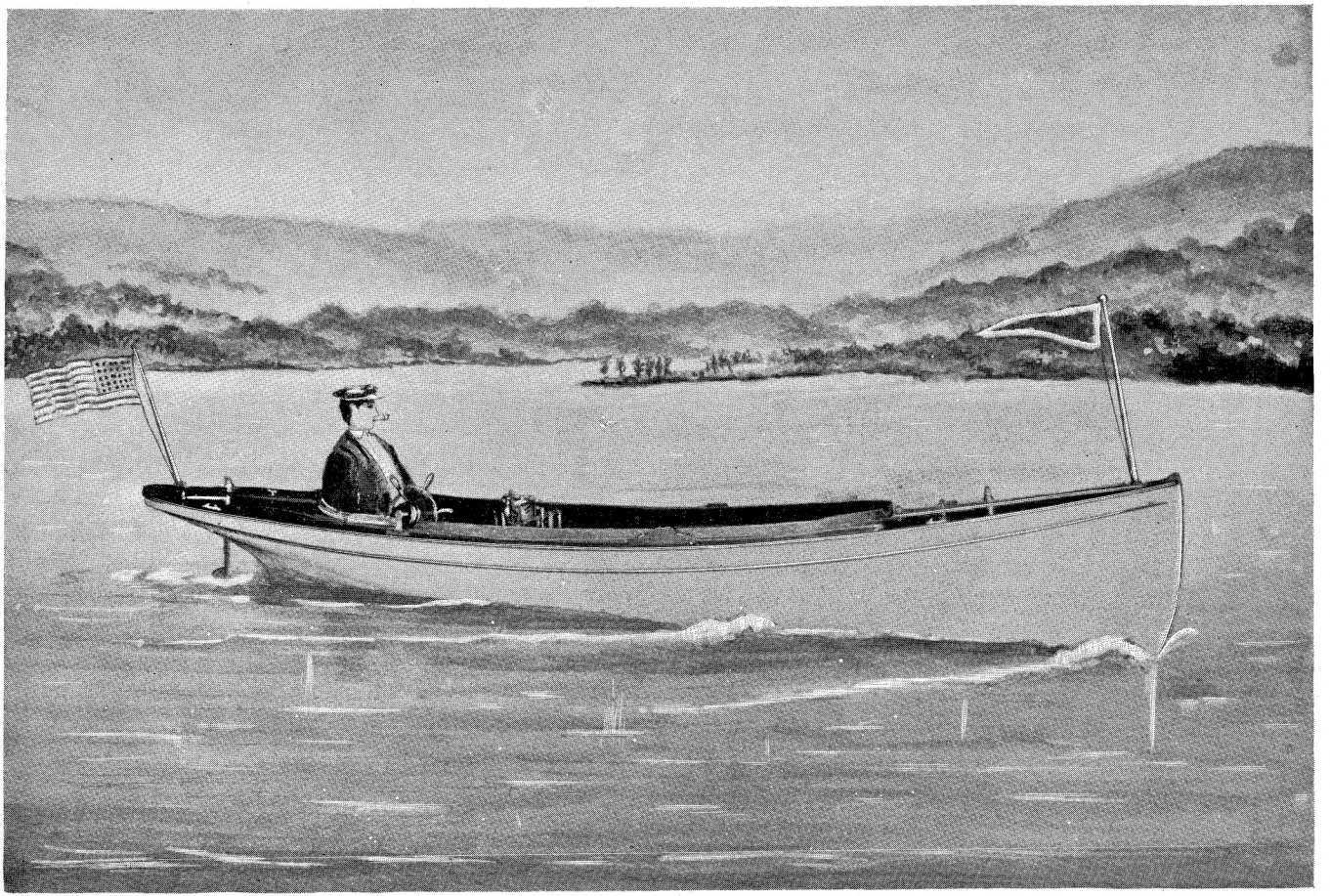
No. 0. 16 Feet. 48 inch Beam. One Horse Power.

Our Launches...

WE manufacture launches the following lengths: 16, 18, 21, 25, 30, 35, 43, 50 and 60 feet, finished in Mahogany, Cherry, Birch or Oak, (our stock boats are always finished in White Oak.) Our models comprise speed, safety and comfort. Our launches are all made of the best selected materials. The keel, keelson, stern post and stem are of white oak and ribs of live white oak bent and planked with selected cypress or cedar fastened with galvanized nails or copper riveted..

All extras such as cushions, signal lights, fenders, name plates, anchors. flags and draperies, we are prepared to furnish at a very low figure.

All boats have lockers under seats the entire length of seats. All our full cabin launches of 43 feet and over have round ends with rounded French plate glass and are equipped with enclosed toilet room with copper hopper. A constant stream of water is running into the hopper when engine is running. The seats are made to draw out for berths. Lockers under the entire seating capacity, consist of hinged doors, with lock and key. They all have an abundance of storage room and galvanized iron lined ice box.



No. 1. 16 Feet. 4 Feet 6 inch Beam. One Horse Power.

Terms.

TERMS: Net Cash F. O. B. cars Grand Rapids, Mich., 25 per cent. Cash must accompany all orders and the balance when launch or engine is accepted and before it is taken away from our factory. These are our invariable terms to all purchasers.

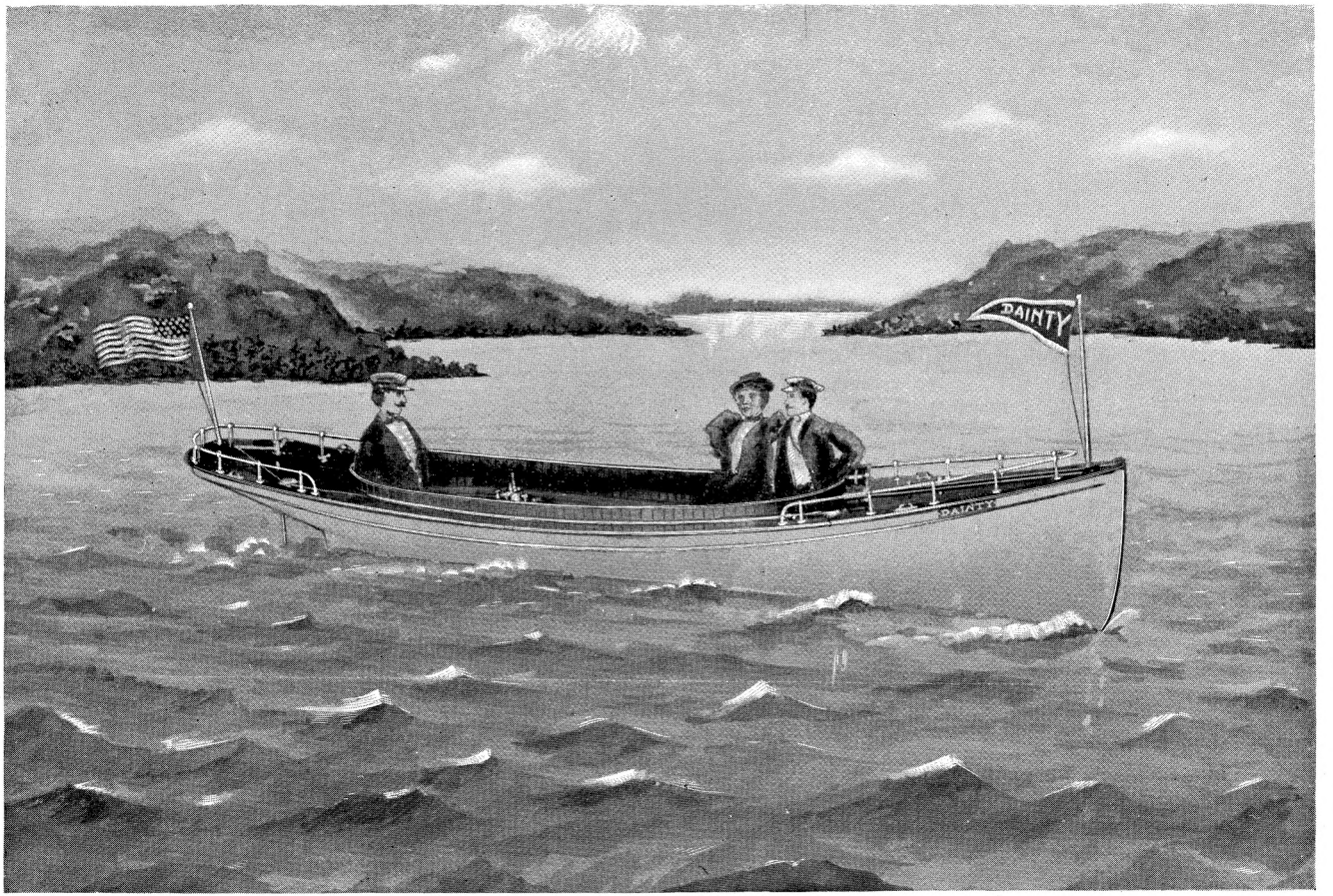
No Engines sent out on trial.

WE guarantee all engines and launches to be as represented and in good working order when shipped. We also guarantee for one year against any defective material or poor workmanship.

We are always pleased te explain the operation of our engine and instruct buyers of launches or engines how to run them, and will send a man at purchaser's expense to the boat, or will give instructions at our factory without charge. All purchasers are invited to be present when their engine is being tested. All engines are tested before leaving our factory and never shipped until they work perfectly and develope more actual power than rated at.

We ship with each launch and engine, blue prints showing engine all connected up in boat, and a book of instructions explaining the operation of it, and with these fully 90 per cent. of our customers succeed in handling them satisfactorily

If through ignorance or neglect the engine should not work properly we assume no responsibility.



No. 2½. 18 Feet. 5 Feet 6 inch Beam. Two Horse Power Engine.

No License. No Government Inspection.

NO licensed engineer or pilot are required by the use of the Sintz Gas Engine, nor is there any government restriction. They are so simple and easily operated that any one of ordinary ability can learn in a few hours to take care of and run them.

Our Reversible Propeller Wheel.

Our propeller wheel is of entirely new model, of our own design, and is thoroughly practicable and perfectly reliable. We use two blades. The blades are made reversible; that is, the wheel can be made a right or left hand screw while the engine is running. When wheel is in full gear forward it is a perfect true screw of suitable pitch to absorb the full power of the engine. It is operated as follows: By a reversing lever placed in the most convenient position in the boat either fore or aft of engine. The centers that carry the blades are fastened in the outside hub which is threaded on to a sleeve which revolves with the shaft. The sleeve being free to move fore and aft by the use of the reverse lever, the operation is as follows: With reversing lever on centre it permits the engine to turn and blades to revolve, but the blades offer no resistance when standing at right angles to the shaft, therefore does not move the boat either direction. Moving the lever forward gives pitch to the blades and speed of boat is increased as reversing lever is moved forward and the operation is the same in reversing. With a 25 foot boat running eight miles per hour she can be brought to a full stop within her own length.

Our Marine engine is the same as our Stationary, except that it has but one small fly wheel and no sub-base. It also has an attachment for changing speed of engine while running.

Our Marine Engine has an eccentric force pump for pumping water around water jacket, and it also has an attachment for bilge pump for pumping bilge water from boat. This can be changed readily by closing one valve and opening the other.

No. 00. 21 Feet. 5 Feet 6 inch Beam. Two Horse Power Engine.

Launches with Engines Complete.

Launch	No. 0.	16 ft.	4 ft. beam with 1 H. P.	$ 300 00
"	No. 0.	16 ft.	4 ft. beam with 2 H. P.	375 00
"	No. 2.	18 ft.	4 ft. beam with 1 H. P.	350 00
"	No. 2.	18 ft.	4 ft. beam with 2 H. P.	425 00
"	No. 2½.	18 ft.	5 ft. beam with 2 H. P.	500 00
"	No. 00.	21 ft.	5 ft. 6 in. beam with 2 H. P.	550 00
"	No. 00.	21 ft.	5 ft. 6 in. beam with 3 H. P.	600 00
"	No. 3.	25 ft.	6 ft. beam with standing canopy, 4 H. P.	800 00
"	No. 4.	30 ft.	7 ft. beam with standing canopy, 6 H. P.	1,100 00
"	No. 5.	30 ft.	7 ft. beam, ½ cabin, 6 H. P.	1.400 00
"	No. 6.	30 ft.	7 ft. beam, full cabin,, 8 H. P.	2,000 00
"	No. 7.	36 ft.	7 ft. 6 in. beam, standing canopy, 8 H. P.	1,400 00
"	No. 8.	43 ft.	7 ft. 6 in. beam, full cabin, 12 H. P.	3,800 00
"	No. 9.	50 ft.	9 ft. beam, full cabin, 16 H. P.	4,500 00

All boats described above are constructed of the best selected materials. Keel, keelson, stem and stern post of seasoned white oak; Ribs of bent white oak and planked with cypress or cedar; all well fastened and will stand hard service. We furnish with all boats brass nickel plated steering wheel, sheaves, chocks and cleats.

PRICE LIST OF EXTRAS.

Brass Nickel plated rails fore and aft for 16, 18 and 21 ft. boats	$18 00
Brass Nickel plated rails fore and aft for 25 ft. boat	25 00
Brass Nickel plated rails fore and aft for 30 ft. boat	30 00
Storm Curtains, 25 and 30 ft. boats	25 00
Awnings for 16 and 18 ft. boats, $20. Awnings, 21 ft., $23.	
Cushions from 75 c. to $3 per running foot.	
Quadrant and lever for throttling engine at bow	10 00

No. 3. 25 Feet. 6 Feet Beam. Four Horse Power Engine.

No. 4. 30 Feet Beam. Six Horse Power Engine.

Our No. 5 Cabin Launch.

LENGTH over all, 30 feet; beam, 7 feet; draught, 28 inches; cabin, 7 feet; cock pit including cabin, 19 feet 8 inches; equipped with Six Horse Power engine. Lockers under seats, canvas storm curtains forward and aft of cabin. Brass nickel plated trimmings, including stearing wheel, rails, chocks and cleats and flag pole sockets. Brussells carpet, Damask curtains, linoleum for engine room, brass lining around engine bed, engineer's brass latern, brass nickel plated name plates each side of bow. Hull painted white, decks and cabin finished in best Spar varnish.

Gasoline tank has capacity for running 800 miles.

Price complete, $1400.

No. 5. 30 Feet. 7 Feet Beam. Six Horse Power Engine.

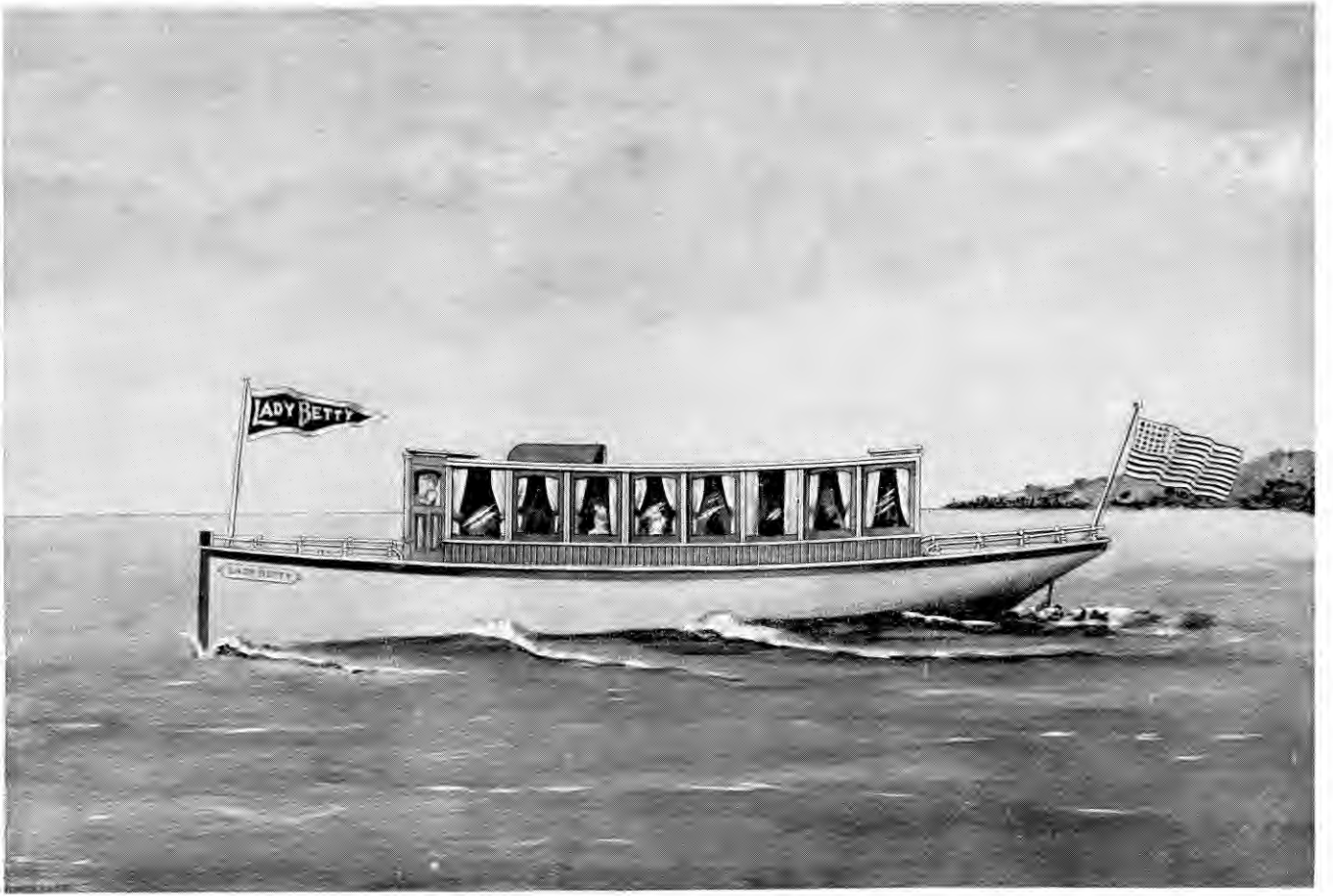
Our No. 6 Cabin Launch.

LENGTH over all, 30 feet; beam, 7 feet; draught, 28 inches; cabin, 17 feet 4 inches; equipped with Eight Horse power tandem engine; hatches over doors leading out on both forward and aft decks. Lockers under seats. All trimmings are brass nickel plated, including stearing wheel, rails, chocks, cleats, flag pole sockets, and rails for upper deck. Brussels carpet, Damask curtains, Mohair plush cushions, linoleum back of engine; engine bed lined with sheet brass. Engineer's brass lantern, brass name plates, nickel plated name plates each side of bow.

Hull painted white, decks and cabin finished in best Spar varnish.

Gasoline tank has capacity for running 800 miles.

Price complete, $2000.



No. 6. 30 Feet. 7 Feet Beam. Eight Horse Power Tandem Engine.

No. 7. 36 Feet. 7 Feet 6 inch Beam. Eight Horse Power Engine.

Our No. 8 Launch

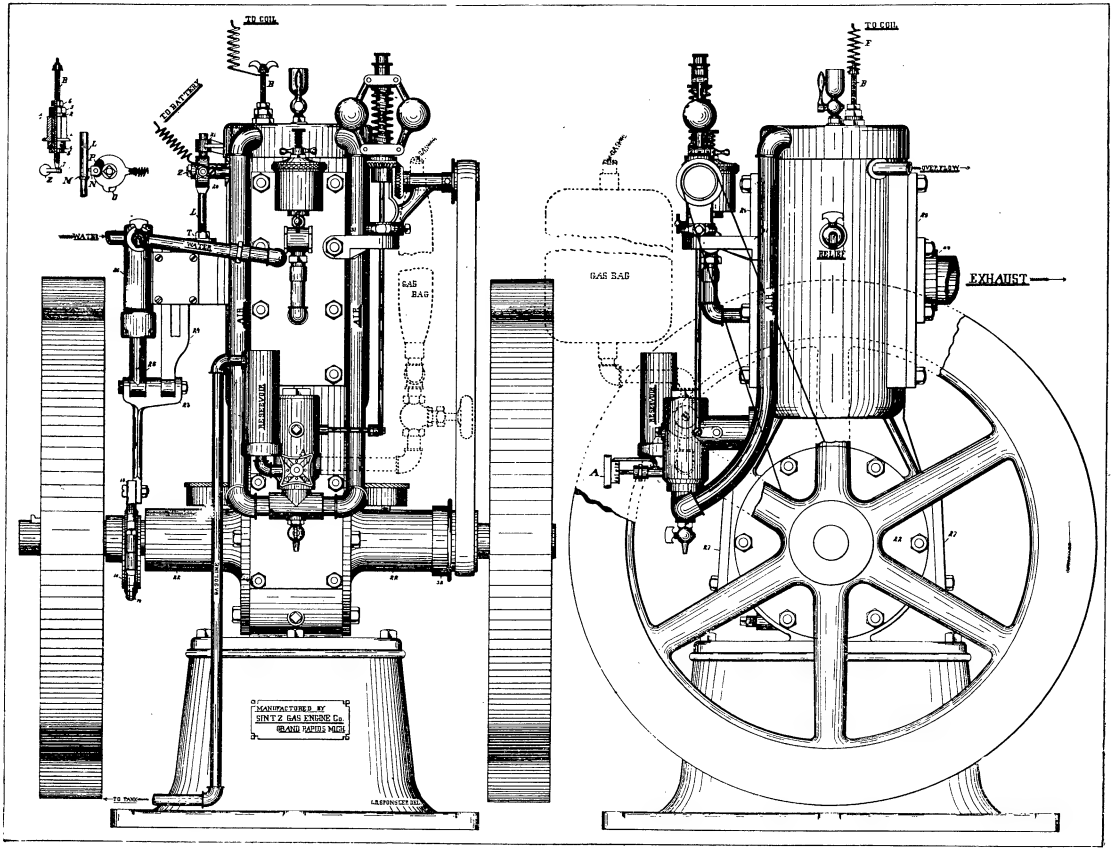
LENGTH over all, 43 feet; beam, 7 feet 6 inches; draught, 3 feet; equipped with 12 Horse Power tandem engines. Cabin, 26 feet; pilot house is ten inches above main cabin, with rounded French plate glass. All windows drop down flush with top of combing. Hatches over first windows aft of pilot house. All trimmings are brass, nickel plated, including steering wheel, rails, chocks, cleats and flag pole sockets; also rails for upper deck. Lockers under seats; Brussells carpet; damask curtains; mohair plush cushions; linoleum for engine room; engine bed lined with sheet brass; mirror and towel rack for toilet room; engineer's brass lantern; water cooler; nickel plated brass name plates, each side of bow; hull painted white Decks and cabin finished in the best Spar varnish.

Gasoline tank has capacity for running 1000 miles.

Price complete, $3800.

No. 8. 43 Feet. 7 Feet 6 inch Beam. Twelve Horse Power Tandem Engine.

Dimensions, 44 Feet by 10 Feet Beam Equipped with 8 H. P. Engine. Speed, 8 miles per hour.
Write for prices and specifications for Stern Wheel Boats.



Single Cylinder Stationary.

Reasons Why you should buy the . . . . . Sintz Engine.

1—It gives more actual power for the cost of running than any engine on the market. We know others claim this but we develop it.

2—It occupies less space and weighs less per horse power.

3—It requires no boiler, coal, wood or fireman and no water tank when used in boat.

4—It dose not require a flame to ignite the charge.

5—It is absolutely safe, because the gasoline is always confined and never being exposed to a flame.

6—It can be, and is, run at higher speed and maintains regular explosions.

7—It is practically free from all valves and has less than one-half as many parts as any other engine.

8—It is clean—no dust, no dirt, no offensive odor and nothing to soil the clothes.

9—It only requires half a minute to start, and runs equally as well in cold weather as in warm.

10—It requires no government inspection, no licensed engineer or pilot.

We send out with each engine shipped from our works a sample can of E. H. Kellogg & Co's oil, this being the best oil for use on our engines, on account of its superior, uniform and anti-corrosive qualities, and can be purchased from us or E. H. Kellogg & Co., 243 South St. New York.

For flange bearings use common cup grease.

There is no more reason in buying a clumsy and heavy stationary type of gasoline engine for a boat or seperator than there is for buying a cumbersome stationary steam engine for a steam boat, when such a perfect and compact gasoline engine as ours is offered at a reasonable price, and weighing but ¼ as much H.P. Stern wheel, side wheel or center wheel boats, such as ferry boats, packets, tow boats etc., equipped with our engine connected direct, and controlled by a lever in Pilot house, has solved the problem of cheap and reliable transportation on the shallow Western and Southern waters, where steam has been abandoned on account of low water and expense of operation. Our boat consumes fuel only while actually running.

Operation.

The operation is as follow: The piston moves upward and draws in charge of gas into the space around crank, the gasoline and air being generated into an explosive gas before it enters the base of cylinder. Just before piston reaches the terminus of downward stroke it passes and opens a port on inside of cylinder, and the gas which has been slightly compressed in base of cylinder in running through the port and is deflector to the top of the cylinder. The piston now ascends and compresses the gas in the clearance space in the top of cylinder where it is ignited at the end of the upper stroke of the piston.

The Governor.

The governor is in the fly wheel and very sensitive. It is connected to the valve between the engine and the generator. When the engine is under full load the valve opens and the engine takes a full charge of gas at each revolution, but when the load is thrown off the governor balls expand and partially closes the valve, allowing only a proportionately smaller charge of gas of the same quality to enter the engine, giving just sufficient gas to do the work while always maintaining the same speed.

The Exploder.

The exploder is the most simple and thoroughly positive in the market today, and the circuit is closed only during contract of the poles, thereby increasing the life of the battery.

Engine Exhaust.

Our engines exhaust into a muffler which is shipped with each engine. It occupies a very small space and the report is not much greater than the exhaust from steam, and there is no perceptible odor from it when gas and oil are being properly feed.

The Throttle.

On Marine engines we use a throttle by which the speed can be regulated from the minimum to the maximum speed while engine will explode at every revolution.

Sintz Gas Engine.

Our engines are adopted to any kind of work where power is required, especially for boats and launches, printing offices, pumping, feed grinding, elevators, hoisting, and machine shops, and our double cylinder High Speed Engine, with two explosions at each revolutions, is superior to any Gas Engine on the market, for electric lighting or woodworking machinery, where high speed and regularity of power are required, this is the only Gas Engine made that can do the work satisfactorily.

Although our single cylinder engine is the highest speeds and weighs less than any Gas Engine made of the same horse power, our double cylinder engine is higher speed and weighs less and occupies less space per horse power than the single cylinder. Our engine can be run in any place, in any temperature, for any purpose and by anyone.

Electric Lighting.

The increased demand for power for electric lighting has led us to build an engine suitable in every particular for this difficult and arduous duty. In incandescent lighting (as all know who are familiar with electricity) it is of the utmost importance that we have not only a reliable power but absolutely uniform, speed; an engine that will instantly adapt itself to the varying load, maintain a strictly uniform speed, and prove its reliability every day in the year. Such an engine as our "High Speed Up-to-Date" double cylinder stationary. We invite comparison with any power on earth.

Gas Engines Have Come to Stay.

THEY are largely taking the place of small boilers and steam engines, being much more economical in the cost of fuel, more cleanly, less risk from fire, no firemen required, less heat in the room, can be placed beside your work and occupy but little space, ready to work in an instant, and when you stop all expense ceases and there is no fire left to endanger your building or boat. The question now is, which is the best gas engine, the most economical, the least likely to get out of order, which will give the greatest power and least cost of running expense? We have it, and now present for your careful consideration the

Sintz Gas Engine

With the claim that it has more advantages than any other gas engine on the market, we manufacture an engine that meets the wants of those who heretofore could not use a gas engine for the reason that they had no gas in their locality. The Sintz Gas Engine is so constructed that it makes its own gas from a small quantity of gasoline as fast and no faster than it is used, and it is entirely independent from previously manufactured gas and is therefore especially adapted for small towns, or in the country where gas cannot be obtained.

It does not require any boiler, coal, wood or water, except the the small amount of water used for the water jacket around the outside of the cylinder. The explosive charge is ignited by a primary battery, "which goes with engine and is kept up at very trifling cost, and without danger of setting fire to anything around it. The expense of running the engine is merely nominal, not exceeding a pint of gasoline per hour per each horse power. This engine can be run at high speed, and have the explosions in the

cylinder regular at every revolution. This is one reason why it gives greater power than any other gas engine of same size and weight. The tank containing the gasoline can be placed outside of the building and connected to the engine by a one-fourth inch pipe. The engine is supplied with all the necessary appliances to make it work automatically. The governor regulates the charge of oil or gas which controls the speed of the engine, thus it will be seen that this engine is adapted for use in printing offices, work shops and other places where cleanliness, safety, small space and regular power are required.

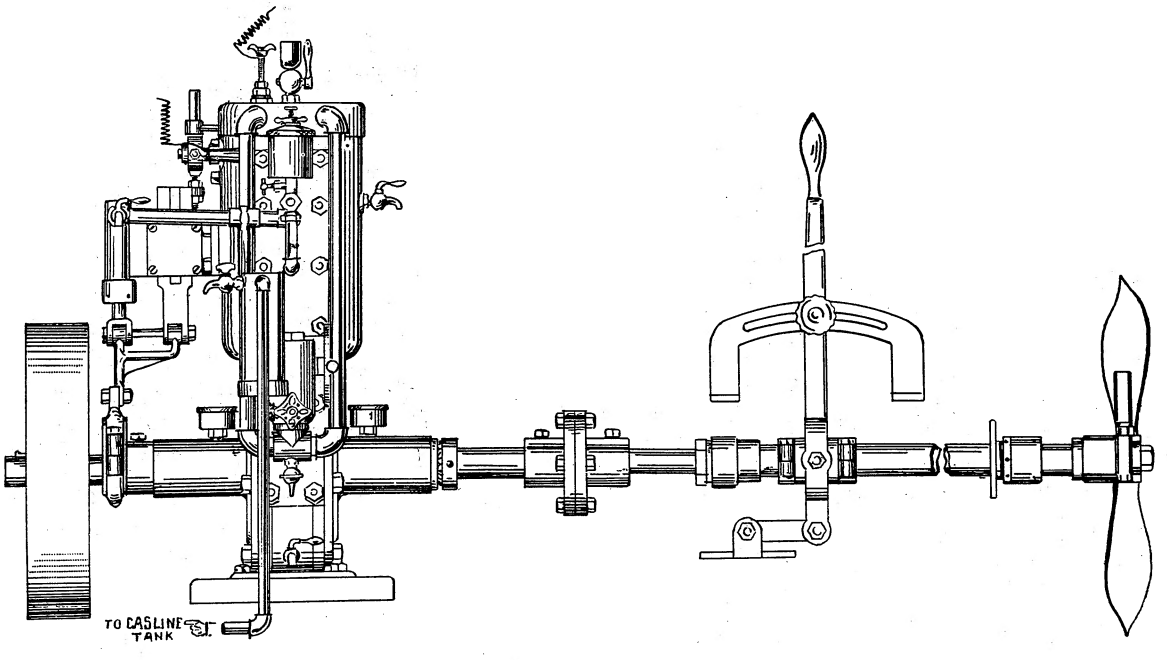
This engine is also adopted to use illuminating gas, natural gas or any other manufactured gasses, as well as the gas it makes from gasoline, and it requires but a short time to change from one to the other. It consumes but fifteen feet of gas, either manufactured or natural, per horse power per hour.

Construction.

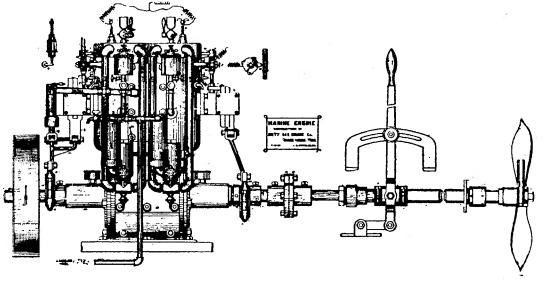
The engine is constructed by the best mechanical skill in all details. The materials are of the best the market affords, all of the castings are dense, close grain and sufficiently hard to stand long continuous wear, our crank shafts, connecting rods and all the studs are made of the best machinery steel, all nuts are finished and case hardened. We use brass bushings in all our crank shaft boxes and phosphorus bronze in all crank boxes. The crank is inclosed in the bed of the engine, therefor cannot throw oil and grease on everything near it.

Generator

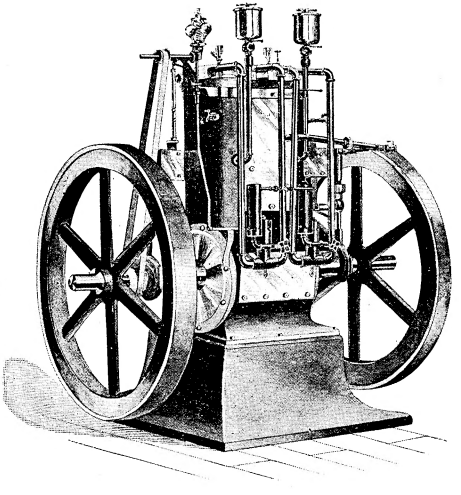
The gas generator consists of a small cylinder or reservoir which holds about one pint of gasoline, with needle valve and dial to regulate to feed with automatic valve which is opened and closed by the movement of the piston. Directly below the reservoir the fresh air is admitted.



Single Cylinder Marine.



Double Cylinder Marine.



Double Cylinder Stationary.
"Up to Date High Speed Engine."

All Prices Net. **F. O. B. Cars Grand Rapids.**

SINGLE CYLINDER MARINE.

H. P.	Revolutions per Minute.	Diameter of Cylinder.	Stroke.	Diam. of Fly Wheel.	Size of Bed Plate.	Height.	Weight.	Diam. of Propeller Shaft.	Diam. of Sleeve.	Distance from Center of Shaft to Bottom of Bed Plate.	Extra for Salt Water Fittings.
1	500	3½ in	3½ in	13 in	7 x10	25 in	172	⅝	1 1-16	5⅛ in	$ 5 00
2	425	4 in	4 in	14 in	9 x12½	27 in	265	⅝	1 1-16	5½ in	5 00
3	400	4⅜ in	5⅛ in	16 in	11 x17	31½ in	380	1	1⅜	6⅜ in	7 50
4	400	5 in	6 in	18 in	16½x20	35 in	628	1¼	1 11-16	7¾ in	7 50
6	360	5¾ in	6 in	20 in	16 x20	37 in	730	1¼	1 11-16	7¾ in	7 50
8	320	6½ in	7 in	24 in	16 x24	46 in	1075	1½	1 15-16	8½ in	10 00
10	300	8 in	8 in	26 in	24 x24	55 in	1600	1½	1 15-16	9¾ in	15 00
15	250	9 in	9 in	30 in	24 x30	63 in	1900	1¾	2 3-16	11¼ in	20 00

DOUBLE CYLINDER MARINE.

4	500	4 in	4 in	14 in	10¾x16	28 in	400	1¼	1 11-16	6¾ in	7 50
6	480	4½ in	5 in	18 in	16½x13⅓	30 in	650	1¼	1 11-16	6½ in	7 50
8	420	5 in	6 in	18 in	19 x24	36 in	850	1½	1 15-16	6 in	10 00
12	400	5¾ in	6 in	20 in	18 x24	44 in	1000	1¾	2 3-16	7½ in	15 00
16	375	6⅜ in	7 in	24 in	24⅓x26½	46 in	1500	2	2 7-16	8½ in	20 00
20	350	8 in	8 in	26 in	24 x36	55 in	2500	1¼	2 11-16	9¾ in	25 00
30	280	9 in	9 in	30 in	30 x36	63 in	3000	2½	2 15-16	11¼ in	30 00

Price for Marine Engine includes stern bearing, stuffing box, propeller shaft, sleeve, reversible propeller wheel, muffler, battery and 6 ft. of shafting.

SINGLE CYLINDER STATIONARY.

H. P.	Revolutions per Minute.	Diameter of Cylinder.	Stroke.	DRIVING PULLEY.		Diameter of Fly Wheel.	Floor Space.	Height.	Weight.
				Diameter.	Face.				
1	500	3½ in	3½ in	4 in	3 in	18 in	9 x12 in	29 in	225
2	425	4 in	4 in	6 in	4 in	20 in	12 x16½ in	31½ in	355
3	400	4⅜ in	5 in	8 in	4 in	25 in	14 x20 in	38 in	685
4	400	5 in	6 in	10 in	6 in	30 in	21 x26 in	42 in	1020
6	360	5¾ in	6 in	12 in	6 in	30 in	21 x26 in	44 in	1150
8	320	6½ in	7 in	16 in	8 in	36 in	21 x27 in	46 in	1600
10	300	8 in	8 in	18 in	8 in	40 in	24 x31 in	55 in	2250
15	280	9 in	9 in	20 in	10 in	46 in	24 x32 in	63 in	2850

DOUBLE CYLINDER STATIONARY.

4	500	4 in	4 in	6 in	4 in	20 in	16½x16½ in	30½ in	600
6	480	4½ in	5 in	8 in	4 in	25½ in	20 x20 in	38 in	1000
8	420	5 in	6 in	10 in	6 in	30 in	26 x26 in	42 in	1475
12	400	5¾ in	6 in	12 in	6 in	30 in	26 x26 in	44 in	1600
16	375	6½ in	7 in	16 in	8 in	36 in	27 x27 in	46 in	2400
20	350	8 in	8 in	18 in	8 in	40 in	27 x27 in	55 in	3400
30	280	9 in	9 in	20 in	10 in	46 in	30 x30 in	63 in	4100

Price of Stationary Engine for gasoline includes muffler and small tank for gasoline; or for gas. bag for gas and muffler. Battery is furnished with all engines.